Design Assumptions for
Nebraska Base Drawing(s) NE200-10-001 a,b,c & d
Rubber Tire Livestock Watering Tank

New drawing: 10/02

Rubber Tire Livestock Watering Tank

No design assumptions for these drawings.

Instructions for
Nebraska Base Drawing(s) NE200-10-001(a,b,c & d)
Rubber Tire Livestock Watering Tank

You have choice of three types of center plugs for your rubber tire tank.
- Page 3 is tank with membrane center plug.
- Page 4 is tank with steel plate center plug.
- Page 5 is tank with concrete center plug.
- Page 6 drawing shows appurtenances for your tank.

Fill in the blue data fields on this page to automatically fill in the titleblock areas on the drawings.
You will also need to complete form fill fields on desired drawings.
Left click on yellow boxes on drawing to mark with X as required for job.
Left click blue data fields to type in required information.

Title block

Title line(s)

Subtitle line

County, State

Who / When

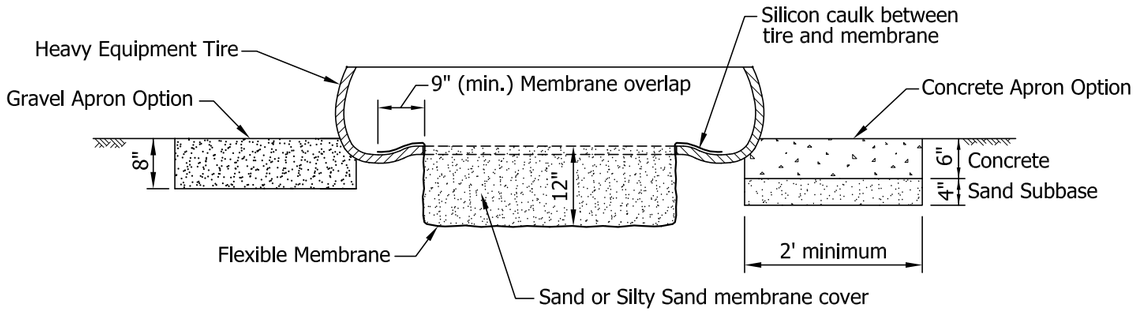
	Who (initials)	When (MM/DD/YY)
Designed		
Drawn		
Checked		

Clear Forms

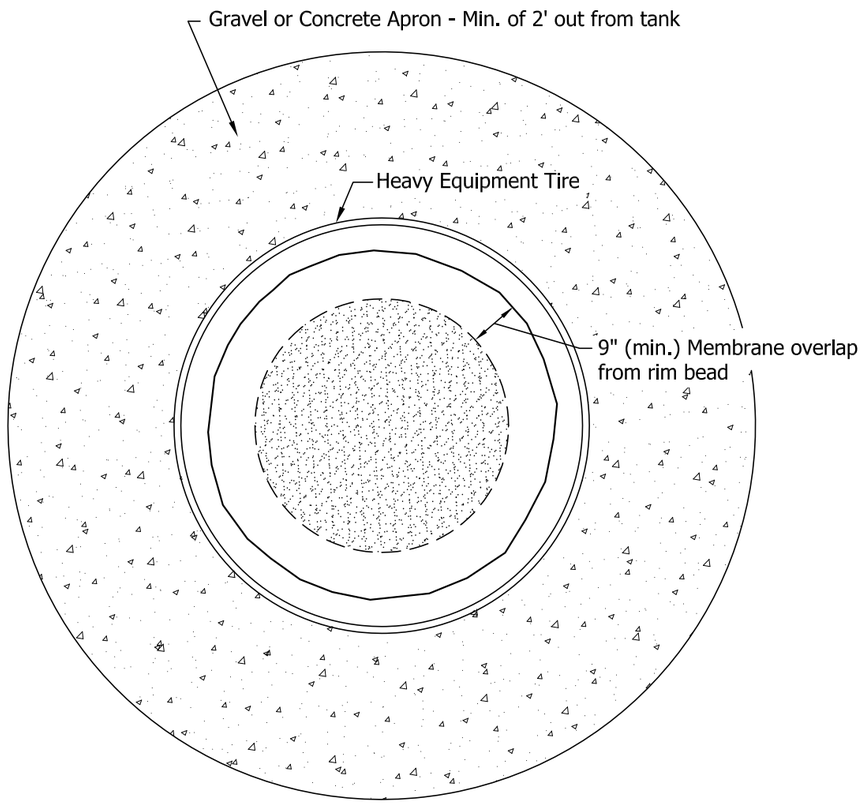
Left click to clear all form fields.

Print Drawings

Note: Select drawing page number.



LIVESTOCK TANK ELEVATION



PLAN VIEW OF TANK INSTALLATION

CONSTRUCTION NOTES

1. Used tire casing shall be free of cuts, rips and holes. The tire shall not be worn beyond the tread depth. Minimum casing thickness shall be 2.5 inches.

2. The flexible membrane shall be polyvinyl chloride, polyethylene, butyl rubber, or other similar material that is highly resistant to bacterial deterioration. The minimum nominal thickness of the membrane shall be:

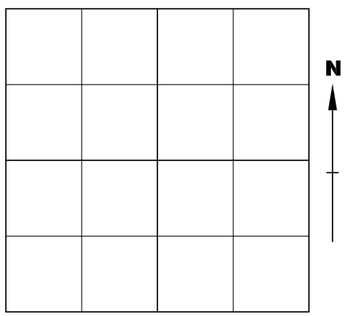
   Polyvinyl Chloride - 4 mils.
   Polyethylene - 4 mils.
   Butyl Rubber - 8 mils.

3. The size of the flexible membrane shall be such that it will lie loosely on the subgrade (10% slack is desirable) and extend beyond the rim bead a minimum of 9 inches.

4. The membrane shall be sealed to tire tank using silicon caulk (ASTM C920). The seal shall be at least 6 inches wide and continuous around the complete perimeter of the rim bead.

5. The membrane shall be covered with approximately one foot of sand or silty sand to or slightly above the rim bead.

6. The concrete apron (if applicable) must be constructed on a firm, well compacted foundation. A minimum 4 inch thick layer of sand subbase for the concrete will be used for soils classified as a CL, CH, ML, MH or CL-ML based on the Unified Classification System. All concrete shall have a minimum compressive strength of 3000 psi. at 28 days.



LOCATION MAP

MATERIALS

DIAMETER OF TIRE _____ FT.

MEMBRANE _____ SQ. FT.

TIRE TANK CAPACITY _____ GALLONS.

DRAIN OUTLET LENGTH _____ FT.
(IF APPLICABLE)

APRON MATERIAL (X in box used)

MATERIAL USED _____

- ☐ CIRCULAR
- ☐ SQUARE
- ☐ NONE

APRON SIZE _____

QUANTITY _____ CU.YD.

WATER APPURTENANCES

- ☐ HYDRANT WITH OVERFLOW
- ☐ HYDRANT WITH FLOAT VALVE
- ☐ CENTER FILL WITH FLOAT VALVE

HYDRANT GUARD (X in box used)

- ☐ POST ASSEMBLY _____ BD.FT.
- ☐ RAIL ASSEMBLY _____ BD.FT.
- ☐ NONE

Date
Designed
Drawn
Checked
Approved

NRCS Natural Resources Conservation Service

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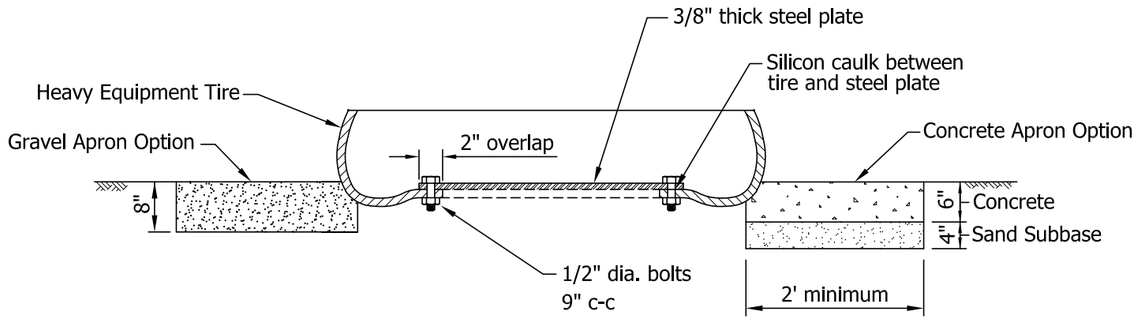
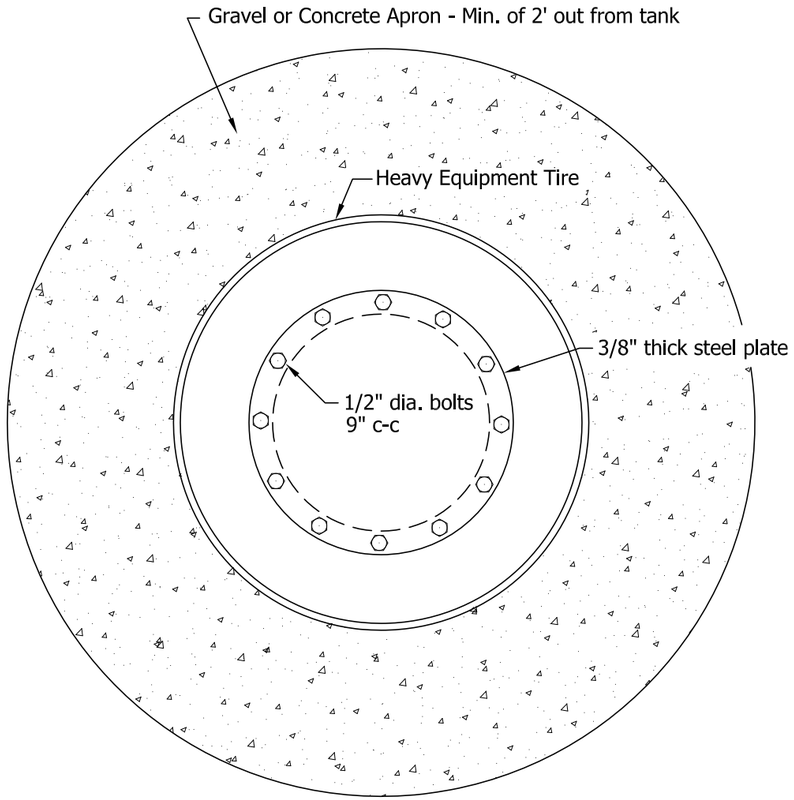
Sheet of

RUBBER TIRE LIVESTOCK WATERING TANK WITH MEMBRANE CENTER PLUG

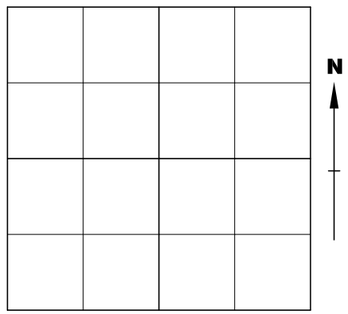
Nebraska Standard Drawing
NE200–10–001a New 10/02



LIVESTOCK TANK ELEVATION



PLAN VIEW OF TANK INSTALLATION



LOCATION MAP

CONSTRUCTION NOTES

1. Used tire casing shall be free of cuts, rips and holes. The tire shall not be worn beyond the tread depth. Minimum casing thickness shall be 2.5 inches.

2. The 3/8" thick steel plate will extend past the inside edge of the rim bead a minimum of 2 inches. The plate will be bolted to the tire with 1/2" dia. galvanized bolts on 9" centers.

3. Silicon caulk (ASTM C920) will be applied to the tire bead prior to bolting the plate to the tire.

4. The concrete apron (if applicable) must be constructed on a firm, well compacted foundation. A minimum 4 inch thick layer of sand subbase for the concrete will be used for soils classified as a CL, CH, ML, MH or CL-ML based on the Unified Classification System. All concrete shall have a minimum compressive strength of 3000 psi. at 28 days.

MATERIALS

DIAMETER OF TIRE _____ FT.

STEEL PLATE _____ LBS.
(3/8" Steel Plate weights 13.81 lb./ft.)

TIRE TANK CAPACITY _____ GALLONS.

DRAIN OUTLET LENGTH _____ FT.
(IF APPLICABLE)

APRON MATERIAL (X in box used)

MATERIAL USED _____

- ☐ CIRCULAR
- ☐ SQUARE
- ☐ NONE

APRON SIZE _____

QUANTITY _____ CU.YD.

WATER APPURTENANCES

- ☐ HYDRANT WITH OVERFLOW
- ☐ HYDRANT WITH FLOAT VALVE
- ☐ CENTER FILL WITH FLOAT VALVE

HYDRANT GUARD (X in box used)

- ☐ POST ASSEMBLY _____ BD.FT.
- ☐ RAIL ASSEMBLY _____ BD.FT.
- ☐ NONE

Date
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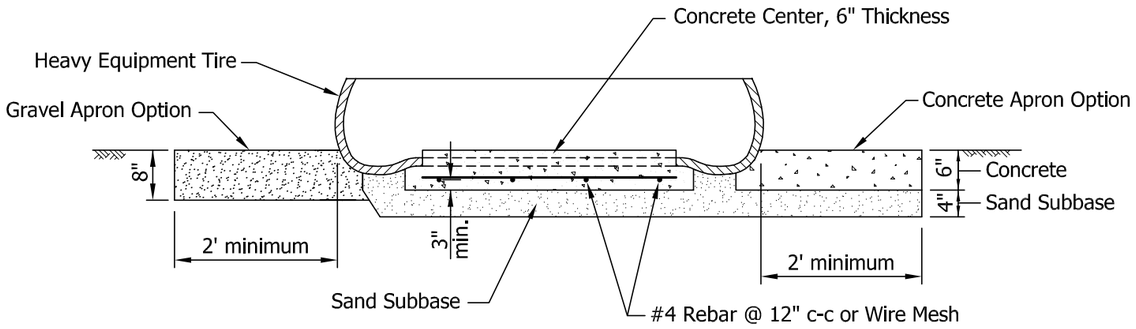
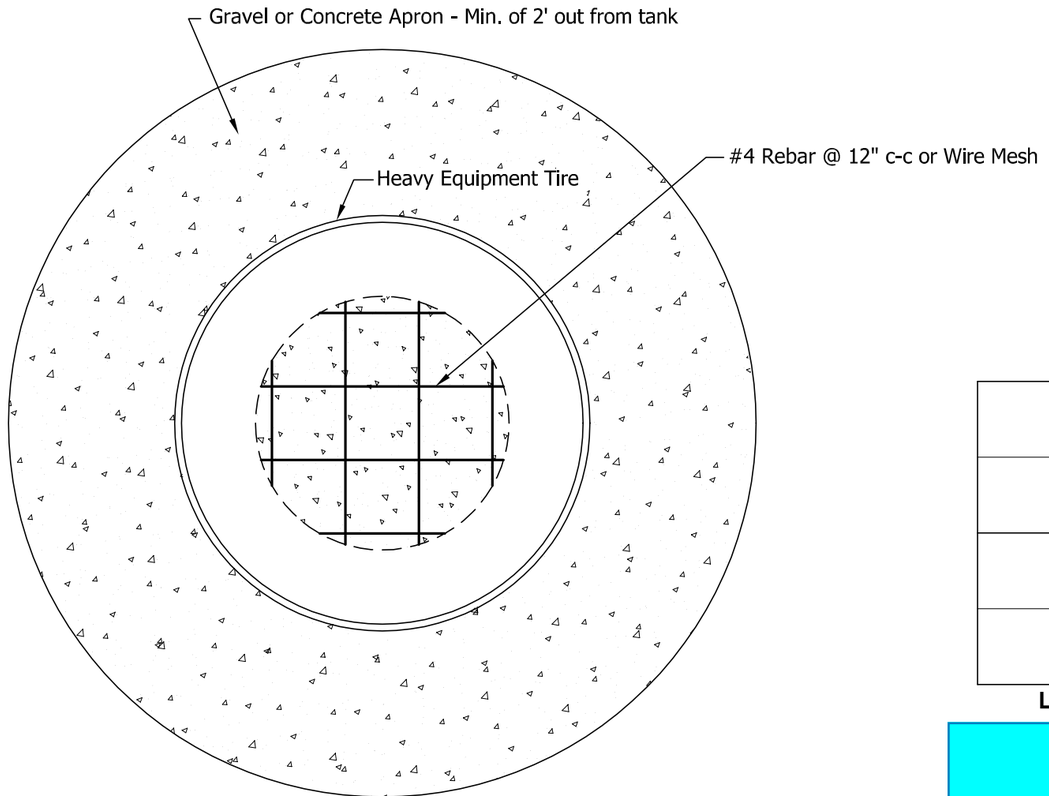
Sheet of

RUBBER TIRE LIVESTOCK WATERING TANK WITH STEEL PLATE CENTER PLUG

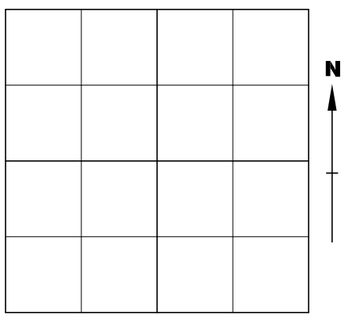
Nebraska Standard Drawing
NE200–10–001b New 10/02



LIVESTOCK TANK ELEVATION



PLAN VIEW OF TANK INSTALLATION



LOCATION MAP

CONSTRUCTION NOTES

1. Used tire casing shall be free of cuts, rips and holes. The tire shall not be worn beyond the tread depth. Minimum casing thickness shall be 2.5 inches.

2. The concrete center plug and concrete apron (if applicable) must be constructed on a firm, well compacted foundation. A minimum 4 inch thick layer of sand subbase for the concrete will be used for soils classified as a CL, CH, ML, MH or CL-ML based on the Unified Classification System.

3. It is recommended that immediately after placing concrete for the center plug the tire is filled with water to a 1.5 inch depth above the concrete. Care should be taken to not disturb the concrete while water is being added to the tire.

4. All concrete shall have a minimum compressive strength of 3000 psi at 28 days.

5. Rebar will be cut to a length which will not extend past the rim bead or 3 inches from the outside edge of the concrete center plug, whichever is less.

6. W5x3, W7x4 or W10x6 wire mesh can be substituted for #4 rebar.

MATERIALS

DIAMETER OF TIRE _____ FT.

TIRE TANK CAPACITY _____ GALLONS.

DRAIN OUTLET LENGTH _____ FT.
(IF APPLICABLE)

CONCRETE _____ CU.YD.

#4 REBAR _____ LB.
(#4 bar weight = 0.668 lb./ft.)

APRON MATERIAL (X in box used)

MATERIAL USED _____

- ☐ CIRCULAR
- ☐ SQUARE
- ☐ NONE

APRON SIZE _____

QUANTITY _____ CU.YD.

WATER APPURTENANCES

- ☐ HYDRANT WITH OVERFLOW
- ☐ HYDRANT WITH FLOAT VALVE
- ☐ CENTER FILL WITH FLOAT VALVE

HYDRANT GUARD (X in box used)

- ☐ POST ASSEMBLY _____ BD.FT.
- ☐ RAIL ASSEMBLY _____ BD.FT.
- ☐ NONE

Date
Designed
Drawn
Checked
Approved

NRCS Natural Resources Conservation Service

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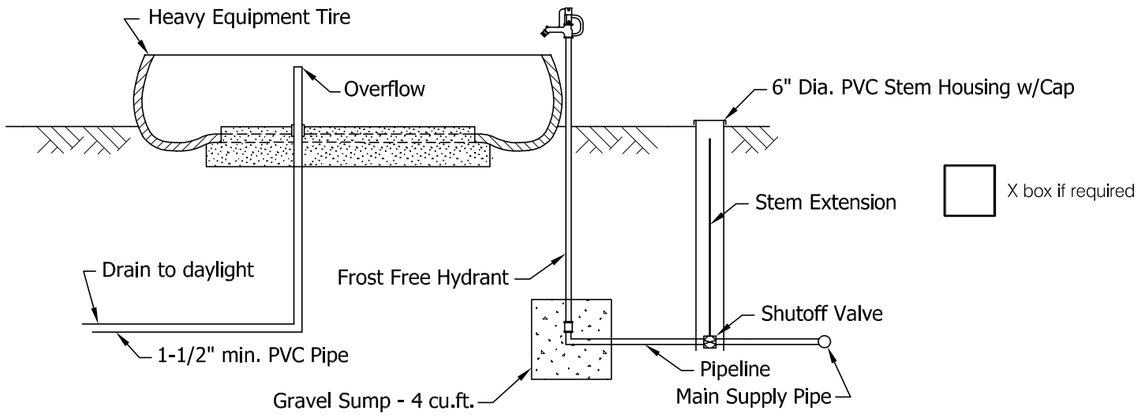
RUBBER TIRE LIVESTOCK WATERING TANK WITH CONCRETE CENTER PLUG

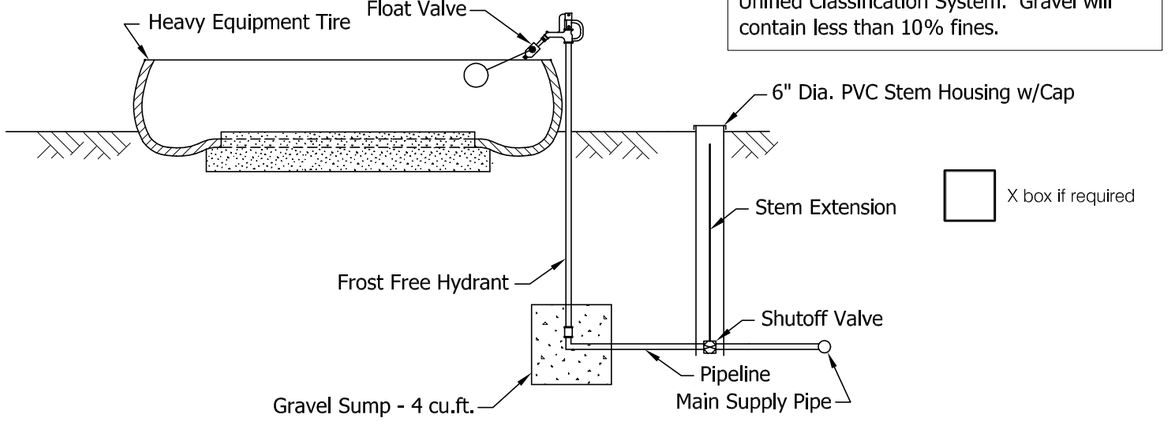
Sheet of

Nebraska Standard Drawing
NE200-10-001c New 10/02

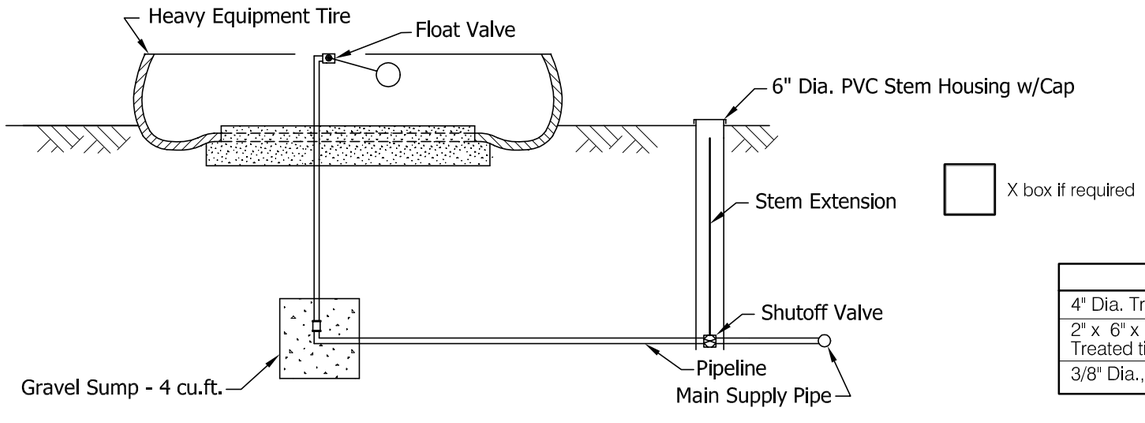


HYDRANT WITH OVERFLOW PIPE

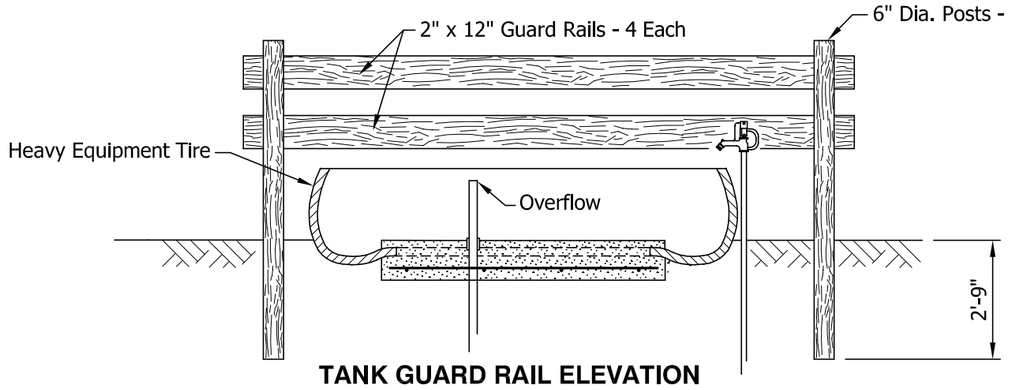
Note:
Gravel sumps are required for soils classified as a CL, CH, ML, MH or CL-ML based on the Unified Classification System. Gravel will contain less than 10% fines.



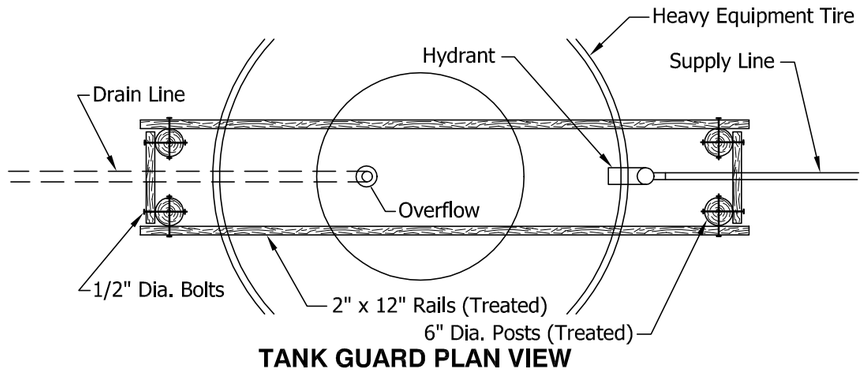
HYDRANT WITH FLOAT VALVE



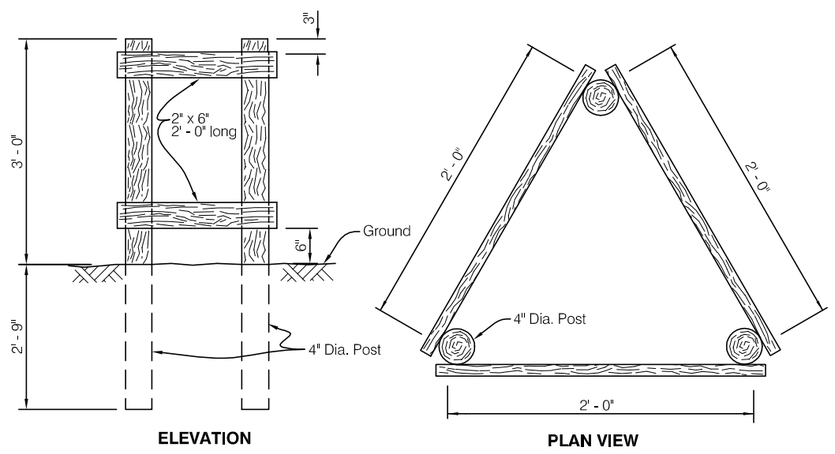
CENTER FILL WITH FLOAT VALVE



TANK GUARD RAIL ELEVATION



TANK GUARD PLAN VIEW



ELEVATION **PLAN VIEW**

GUARD POST ASSEMBLY

TABLE OF QUANTITIES
GUARD POST ASSEMBLY

ITEM	UNIT	QUANTITY
4" Dia. Treated timber post	each	3
2" x 6" x 2' - 0" long, Treated timber	each	6
3/8" Dia., 4" long lag screws	each	24

TABLE OF QUANTITIES
GUARD RAIL ASSEMBLY

ITEM	UNIT	QUANTITY
6" Dia. Treated timber post	each	4
2" x 12" x _____ long, and 2" x 12"x _____ long Treated timber	each	4
3/8" Dia., 8" long carriage bolts	each	32

Nebraska Standard Drawing
NE200-10-001d New 10/02

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WATERING FACILITY APPURTENANCES

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